

Name: M. Umer farooq | Quiz Subject:
Chemistry

Time Remaining: 45/45 (Minutes)

Q.1

Test 3 Gases

CHEMISTRY NMDCAT

To develop non-ideality in gases the high pressure is required:

- a. to increase the intramolecular distances
- b. to decrease the attractive forces
- c. to bring the molecules close to each other
- d. to increase the Kinetic energy of molecules

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Correct Answer:

☐ A ☐ B ☐ C ☐ D

Next



Time Remaining: 44/45 (Minutes)

Q.2

Test 3 Gases

CHEMISTRY NMDCAT

Which one of the following parameters is very important for the non-ideal behavior of gases?

- a. low pressure and low volume
- b. high volume and high temperature
- c. low temperature and high pressure
- d. high temperature, high volume and high pressure

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 44/45 (Minutes)

Q.3

Test 3 Gases

CHEMISTRY NMDCAT

Non-polar gases are thought to have _____ in them as compared to ideal ones:

- a. strong polarizability
- b. weak polarizability
- c. high temperature
- d. low temperature

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 44/45 (Minutes)

Q.4

Test 3 Gases

CHEMISTRY NMDCAT

With the increase in polarizability, the ideal behavior of non-polar gases:

- a. increases
- b. decreases
- c. does not change
- d. may or may not be changed

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 44/45 (Minutes)

Q.5

Test 3 Gases

CHEMISTRY NMDCAT

Ideal gasses have all the following characteristics except:

- a. The molecules occupy no space
- b. Collisions among the molecules of an ideal gas are perfectly elastic
- c. Absence of intermolecular forces
- d. All of the above are correct

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 44/45 (Minutes)

Q.6

Test 3 Gases

CHEMISTRY NMDCAT

The value of compressibility factor for an ideal gas is:

- a. zero b. unity
c. fraction d. none of given

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 43/45 (Minutes)

Q.7

Test 3 Gases

CHEMISTRY NMDCAT

When a graph is plotted between pressure on x-axis and the PV/RT on y-axis for an ideal gas, then:

- a. Hyperbolic curve is obtained
- b. A straight line is obtained running in-between x-axis and y-axis
- c. A straight line is obtained running parallel to pressure axis
- d. A peak is obtained running parallel to compressibility factor axis

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 43/45 (Minutes)

Q.8

Test 3 Gases

CHEMISTRY NMDCAT

Which one of the following gases show more deviation from ideal behavior?

a. CO_2

b. H_2

c. N_2

d. He

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 43/45 (Minutes)

Q.9

Test 3 Gases

CHEMISTRY NMDCAT

At what temp the gases will is likely to obey the K.M.T?

a. low

b. highest

c. high

d. lowest

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 43/45 (Minutes)

Q.10

Test 3 Gases

CHEMISTRY NMDCAT

The deciding criteria for non-ideality is:

- a. Polarity b. Molar mass
c. bonds d. none of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 43/45 (Minutes)

Q.11

Test 3 Gases

CHEMISTRY NMDCAT

Charle's law is an example of _____ process:

- a. isothermal b. isobaric
c. isochoric d. All of given

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 43/45 (Minutes)

Q.12

Test 3 Gases

CHEMISTRY NMDCAT

Boyle's law is an example of _____ process:

- a. isothermal b. isobaric
c. isochoric d. All of given

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 42/45 (Minutes)

Q.13

Test 3 Gases

CHEMISTRY NMDCAT

Which gas is likely to be the most Non - ideal?

a. H_2S

b. Cl_2

c. NH_3

d. Ne

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Correct Answer:



A



B



C



D

Next

Back

Chemistry

Time Remaining: 42/45 (Minutes)

Q.14

Test 3 Gases

CHEMISTRY NMDCAT

In Boyle's law _____ graph is more informative:

- a. Direct b. Inverse
c. Both of the d. None of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 42/45 (Minutes)

Q.15

Test 3 Gases

CHEMISTRY NMDCAT

If pressure remains constant at given temp the volume of an ideal gas is doubled as compared to volume at 0°C :

a. -273°C

b. 273K

c. 273°C

d. 546°C

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Correct Answer:



A



B



C



D

Next

Back

Chemistry

Time Remaining: 42/45 (Minutes)

Q.16

Test 3 Gases

CHEMISTRY NMDCAT

Density of gas in S.I. units is expressed as:

a. $Kg\ m^{-3}$

b. $Kg\ dm^{-3}$

c. $g\ dm^{-3}$

d. $g\ m^{-3}$

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Correct Answer:



A



B



C



D

Next

Back

Chemistry

Time Remaining: 42/45 (Minutes)

Q.17

Test 3 Gases

CHEMISTRY NMDCAT

A real gas obeying Vander Waal's equation will resemble ideal gas if

- a. Both 'a' and 'b' are large
- b. both 'a' and 'b' are small
- c. 'a' is small and 'b' is large
- d. 'a' is large and 'b' is small

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 42/45 (Minutes)

Q.18

Test 3 Gases

CHEMISTRY NMDCAT

Which is correct?

- a. 1 mm Hg = 1 torr = 1 atm
- b. 1mm Hg = 760 torr = 1 atm
- c. 760 mm Hg = 760 torr = 1 atm
- d. 760 mm Hg = 1 torr = 1 atm

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 41/45 (Minutes)

Q.19

Test 3 Gases

CHEMISTRY NMDCAT

Among real gases the most ideal group is expected to be

- a. Halogens b. Noble gases
c. Alkali metals d. Group VA

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 41/45 (Minutes)

Q.20

Test 3 Gases

CHEMISTRY NMDCAT

The order of rate of diffusion of gases NH_3 , H_2 , HCl and CO is:

- a. $H_2 > CO > HCl > NH_3$
- b. $NH_3 > H_2 > CO > HCl$
- c. $H_2 > NH_3 > CO > HCl$
- d. $HCl > CO > NH_3 > H_2$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 41/45 (Minutes)

Q.21

Test 3 Gases

CHEMISTRY NMDCAT

If $V_1 = 5$ litres for a gas at STP then what it will be at RTP ?

a. >5

b. <5

c. $=5$

d. 1

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 41/45 (Minutes)

Q.22

Test 3 Gases

CHEMISTRY NMDCAT

Different gases with same K.E move with
_____ velocities

- a. same b. different
c. equal d. None of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 41/45 (Minutes)

Q.23

Test 3 Gases

CHEMISTRY NMDCAT

If two gases have same molecular mass, which statement is correct about them in H_2O :

- a. they have equal solubility in H_2O at room temperature
- b. they have same b.p
- c. same rate of diffusion
- d. they have same number of atoms

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 40/45 (Minutes)

Q.24

Test 3 Gases

CHEMISTRY NMDCAT

At absolute zero:

- a. Absolute volume is zero
- b. Gases liquefy
- c. All gases remain same
- d. Volume of gases reduce to actual volume

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 40/45 (Minutes)

Q.25

Test 3 Gases

CHEMISTRY NMDCAT

Equal volume of H_2 and He are inserted in the same vessel. Pressure exerted by H_2 and He in the ratio of:

a. 1 : 1

b. 2 : 1

c. 1 : 2

d. 4 : 1

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 40/45 (Minutes)

Q.26

Test 3 Gases

CHEMISTRY NMDCAT

With the increase in Vander Waal's forces the non-ideality in a gas:

- a. Increases b. Decreases
c. Both a & b d. have no effect

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 40/45 (Minutes)

Q.27

Test 3 Gases

CHEMISTRY NMDCAT

In which of the following molecule polarizability is greater

a. Cl_2

b. F_2

c. Br_2

d. I_2

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 40/45 (Minutes)

Q.28

Test 3 Gases

CHEMISTRY NMDCAT

Correct statement about ideal gas:

- a. have forces of attraction
- b. exist in nature
- c. J. Thomson effect is not applicable
- d. all statements are incorrect

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 39/45 (Minutes)

Q.29

Test 3 Gases

CHEMISTRY NMDCAT

The relationship between pressure and volume at same temperature is called

- a. isobar b. isotherm
c. isotone d. isochore

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 39/45 (Minutes)

Q.30

Test 3 Gases

CHEMISTRY NMDCAT

At S.T.P which of the following gas has the lowest density:

a. Ar

b. Cl_2 c. CH_4 d. N_2

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Correct Answer:



A



B



C



D

Next

Back

Chemistry

Time Remaining: 39/45 (Minutes)

Q.31

Test 3 Gases

CHEMISTRY NMDCAT

In gaseous state the approximate distance between molecules is how many times greater than their diameters.

a. 400

b. 600

c. 300

d. 900

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Correct Answer:



A



B



C



D

Next

Back

Chemistry

Time Remaining: 39/45 (Minutes)

Q.32

Test 3 Gases

CHEMISTRY NMDCAT

Ammonia gas is liquefied more easily than nitrogen, hence

- a. Van der Waal's constant a & b of NH_3 $>$ than of N_2
- b. Van der Waal's constant a & b of NH_3 $<$ than of N_2
- c. $a(\text{NH}_3) < a(\text{N}_2)$ but $b(\text{NH}_3) > b(\text{N}_2)$
- d. $a(\text{NH}_3) > a(\text{N}_2)$ but $b(\text{NH}_3) < b(\text{N}_2)$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 39/45 (Minutes)

Q.33

Test 3 Gases

CHEMISTRY NMDCAT

Which one of the following noble gases have high critical temperature?

a. Ne

b. Ar

c. Xe

d. Rn

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 38/45 (Minutes)

Q.34

Test 3 Gases

CHEMISTRY NMDCAT

For an ideal gas the compressibility factor is equal to

a. 0.5

b. 1

c. 1.5

d. 2

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 38/45 (Minutes)

Q.35

Test 3 Gases

CHEMISTRY NMDCAT

Which of the following gases shows maximum non-ideal behavior at 0°C

a. He

b. H₂

c. N₂

d. CO₂

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 38/45 (Minutes)

Q.36

Test 3 Gases

CHEMISTRY NMDCAT

Most ideal gas at room temp is:

a. CO_2

b. NH_3

c. SO_2

d. N_2

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 38/45 (Minutes)

Q.37

Test 3 Gases

CHEMISTRY NMDCAT

Who studied the physical behaviour of real gases:

- a. Clausius
- b. Maxwell
- c. Boltzmann
- d. Van der Waal's

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back



Time Remaining: 37/45 (Minutes)

Q.38

Test 3 Gases

CHEMISTRY NMDCAT

Gases deviate from ideal behavior at high pressure .Which is correct for non-ideality?

- a. at high pressure, the gas molecule move in one direction only
- b. at high pressure, the collision between the gas molecule are increased manifold
- c. at high pressure, the volume of gas becomes insignificant
- d. at high pressure, the intermolecular attractions become significant

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Next

Back

Chemistry

Time Remaining: 37/45 (Minutes)

Q.39

Test 3 Gases

CHEMISTRY NMDCAT

The density of a gas can be determined by formula:

a. $d = \frac{PM}{RT}$

b. $d = \frac{RT}{PM}$

c. $d = \frac{PMR}{T}$

d. $d = \frac{PMT}{R}$

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Correct Answer:



A



B



C



D

Next

Back



Time Remaining: 37/45 (Minutes)

Q.40

Test 3 Gases

CHEMISTRY NMDCAT

The value of R (in $\text{Nm K}^{-1} \text{mol}^{-1}$) is

a. 8.214

b. 8.314

c. 0.0321

d. 62.4

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Back



Q. 1

To develop non-ideality in gases the high pressure is required:

- a. to increase the intramolecular distances
- b. to decrease the attractive forces
- c. to bring the molecules close to each other**
- d. to increase the Kinetic energy of molecules

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Q. 2

Which one of the following parameters is very important for the non-ideal behavior of gases?

- a. low pressure and low volume
- b. high volume and high temperature
- c. low temperature and high pressure**
- d. high temperature, high volume and high pressure

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Q. 3

Non-polar gases are thought to have _____ in them as compared to ideal ones:

- a. strong polarizability
- b. weak polarizability
- c. high temperature
- d. low temperature

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Q. 4

With the increase in polarizability, the ideal behavior of non-polar gases:

- a. increases
- b. decreases**
- c. does not change
- d. may or may not be changed

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Q. 5

Ideal gasses have all the following characteristics except:

- a. The molecules occupy no space
- b. Collisions among the molecules of an ideal gas are perfectly elastic
- c. Absence of intermolecular forces
- d. All of the above are correct

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Q. 6

The value of compressibility factor for an ideal gas is:

- a. zero
- b. unity
- c. fraction
- d. none of given

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Q. 7

When a graph is plotted between pressure on x-axis and the PV/RT on y-axis for an ideal gas, then:

- a. Hyperbolic curve is obtained
- b. A straight line is obtained running in-between x-axis and y-axis
- c. A straight line is obtained running parallel to pressure axis
- d. A peak is obtained running parallel to compressibility factor axis

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Q. 8

Which one of the following gases show more deviation from ideal behavior?

a. CO_2

c. N_2

b. H_2

d. He

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Q. 9

At what temp the gases will is likely to obey the K.M.T?

a. low

b. highest

c. high

d. lowest

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Q. 10

The deciding criteria for non-ideality is:

a. Polarity

c. bonds

b. Molar mass

d. none of these

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Q. 11

Charle's law is an example of _____ process:

- a. isothermal
- b. isobaric**
- c. isochoric
- d. All of given

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Q. 12

Boyle's law is an example of _____ process:

a. isothermal

b. isobaric

c. isochoric

d. All of given

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Q. 13

Which gas is likely to be the most Non - ideal?

a. H_2S

b. Cl_2

c. NH_3

d. Ne

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Q. 14

In Boyle's law _____ graph is more informative:

a. Direct

b. Inverse

c. Both of the

d. None of these

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Q. 15

If pressure remains constant at given temp the volume of an ideal gas is doubled as compared to volume at 0°C :

a. -273°C

b. 273K

c. 273°C

d. 546°C

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Q. 16

Density of gas in S.I. units is expressed as:

a. $Kg\ m^{-3}$

b. $Kg\ dm^{-3}$

c. $g\ dm^{-3}$

d. $g\ m^{-3}$

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Q. 16

Density of gas in S.I. units is expressed as:

a. $Kg\ m^{-3}$

b. $Kg\ dm^{-3}$

c. $g\ dm^{-3}$

d. $g\ m^{-3}$

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Q. 17

A real gas obeying Vander Waal's equation will resemble ideal gas if

- a. Both 'a' and 'b' are large
- b. both 'a' and 'b' are small
- c. 'a' is small and 'b' is large
- d. 'a' is large and 'b' is small

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Q. 18

Which is correct?

- a. $1 \text{ mm Hg} = 1 \text{ torr} = 1 \text{ atm}$
- b. $1 \text{ mm Hg} = 760 \text{ torr} = 1 \text{ atm}$
- c. $760 \text{ mm Hg} = 760 \text{ torr} = 1 \text{ atm}$
- d. $760 \text{ mm Hg} = 1 \text{ torr} = 1 \text{ atm}$

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Q. 19

Among real gases the most ideal group is expected to be

- a. Halogens
- b. Noble gases
- c. Alkali metals
- d. Group VA

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Q. 20

The order of rate of diffusion of gases NH_3 , H_2 , HCl and CO is:

- a. $H_2 > CO > HCl > NH_3$
- b. $NH_3 > H_2 > CO > HCl$
- c. $H_2 > NH_3 > CO > HCl$
- d. $HCl > CO > NH_3 > H_2$

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Q. 21

If $V_1 = 5$ litres for a gas at STP then what it will be at RTP ?

a. >5

b. <5

c. $=5$

d. 1

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Q. 22

Different gases with same K.E move with _____ velocities

- a. same
- b. different
- c. equal
- d. None of these

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Q. 23

If two gases have same molecular mass, which statement is correct about them in H_2O :

- a. they have equal solubility in H_2O at room temperature
- b. they have same b.p
- c. same rate of diffusion
- d. they have same number of atoms

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Q. 24

At absolute zero:

- a. Absolute volume is zero
- b. Gases liquefy**
- c. All gases remain same
- d. Volume of gases reduce to actual volume

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Q. 25

Equal volume of H_2 and He are inserted in the same vessel.

Pressure exerted by H_2 and He in the ratio of:

a. 1 : 1

b. 2 : 1

c. 1 : 2

d. 4 : 1

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Q. 26

With the increase in Vander Waal's forces the non-ideality in a gas:

a. Increases

b. Decreases

c. Both a & b

d. have no effect

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Q. 27

In which of the following molecule polarizability is greater

a. Cl_2

b. F_2

c. Br_2

d. I_2

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Q. 28

Correct statement about ideal gas:

- a. have forces of attraction
- b. exist in nature
- c. J. Thomson effect is not applicable
- d. all statements are incorrect

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Q. 29

The relationship between pressure and volume at same temperature is called

- (a) isobar
- (b) isotherm
- (c) isotone
- (d) isochore

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Q. 30

At S.T.P which of the following gas has the lowest density:

(a) Ar

(b) Cl_2

(c) CH_4

(d) N_2

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Q. 31

In gaseous state the approximate distance between molecules is how many times greater than their diameters.

(a) 400

(b) 600

(c) 300

(d) 900

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Q. 32

Ammonia gas is liquefied more easily than nitrogen, hence

- (a) Van der Waal's constant a & b of NH_3 $>$ than of N_2
- (b) Van der Waal's constant a & b of NH_3 $<$ than of N_2
- (c) $a(\text{NH}_3) < a(\text{N}_2)$ but $b(\text{NH}_3) > b(\text{N}_2)$
- (d) $a(\text{NH}_3) > a(\text{N}_2)$ but $b(\text{NH}_3) < b(\text{N}_2)$

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Q. 33

Which one of the following noble gases have high critical temperature?

(a) Ne

(b) Ar

(c) Xe

(d) Rn

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Q. 34

For an ideal gas the compressibility factor is equal to

(a) 0.5

(b) 1

(c) 1.5

(d) 2

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Q. 35

Which of the following gases shows maximum non-ideal behavior at 0°C

(a) He

(b) H_2

(c) N_2

(d) CO_2

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Q. 36

Most ideal gas at room temp is:

(a) CO_2

(b) NH_3

(c) SO_2

(d) N_2

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Q. 37

Who studied the physical
behaviour of real gases:

- (a) Clausius
- (b) Maxwell
- (c) Boltzmann
- (d) Van der Waal's

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Q. 38

Gases deviate from ideal behavior at high pressure. Which is correct for non-ideality?

- (a) at high pressure, the gas molecule move in one direction only
- (b) at high pressure, the collision between the gas molecule are increased manifold
- (c) at high pressure, the volume of gas becomes insignificant
- (d) at high pressure, the intermolecular attractions become significant

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Q. 39

The density of a gas can be determined by formula:

(a) $d = \frac{PM}{RT}$

(b) $d = \frac{RT}{PM}$

(c) $d = \frac{PMR}{T}$

(d) $d = \frac{PMT}{R}$

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Q. 40

The value of R (in $\text{Nm K}^{-1} \text{mol}^{-1}$) is

(a) 8.214

(b) 8.314

(c) 0.0321

(d) 62.4

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